

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) An image-processing device comprising:

a solid-state image pickup element provided with a plurality of unit pixels, each unit pixel including a photo diode and at least one transistor for detecting an optical signal; and

a circuit for changing a gate-applied that changes a voltage applied to each gate of a plurality of the transistors;

~~wherein~~ the circuit for changing a the gate-applied voltage ~~applies~~—a predetermined applying a first voltage to each gate of a plurality of the transistors in a plurality of lines from a first voltage source while in an accumulation state when carriers are generated from the photo diode in response to received light, ~~and~~

the circuit for changing the gate-applied voltage applying a second voltage to each of the gates of the plurality of transistors in the plurality of lines while in a reset state after the accumulation state, and

the circuit for changing the gate-applied voltage applying a third ~~another~~ predetermined voltage from a second voltage source to each of the gates of the plurality of transistors in a selected one of the plurality of lines while in a reading out state when a signal in response to carriers accumulated in the accumulation state is read out after the reset state.

2. (Currently Amended) ~~An~~ The image-processing device according to claim 1, wherein the circuit for changing a the gate-applied voltage ~~applies a third~~ applying a fourth predetermined voltage to each of the gates of a the plurality of the transistors in the plurality of lines from a third voltage source while in a clearing state when residual carriers in the solid-state image pickup device are excluded from the solid-state image pickup device.

3. (Currently Amended) ~~An~~ The image-processing device according to claim 1 further comprising:

a plurality of gate voltage supplying circuits coupled to the gates of a the plurality of the transistors;

wherein the changed applied voltage is applied to a plurality of the gate voltage supplying circuits from the circuit for changing a the gate-applied voltage.

4. (Currently Amended) ~~An~~ The image-processing device according to claim 1 further comprising:

a plurality of gate voltage supplying circuits coupled to the gates of a the plurality of the transistors;

wherein each of a the plurality of the gate voltage supplying circuits includes the circuit for changing a the gate-applied voltage.

5-6. (Cancelled)

7. (New) The image-processing device according to claim 1, the circuit for changing the gate-applied voltage applying the third voltage from the second voltage source to each of the gates of the plurality of transistors of the plurality of lines while in a preset state after the reading out state.

8. (New) The image-processing device according to claim 2 further comprising:

a circuit for changing a source-applied that changes a voltage applied to each source of the plurality of the transistors,

the circuit for changing the source-applied voltage applying a fifth voltage to each of the sources of the plurality of the transistors while in the clearing state, and

an output voltage while in the clearing state being equal to a sum of the third voltage and the fifth voltage.

9. (New) The image-processing device according to claim 2, the circuit for changing the gate-applied voltage applying the second voltage to each of the gates of the plurality of the transistors in the plurality of lines while in a second reset state after the clearing state, and

the circuit for changing the gate-applied voltage applying the third voltage to each of the gates of the plurality of the transistors in the selected one of the plurality of lines while in a second reading out state when an offset voltage including a noise component is read out after the second reset state.

10. (New) The image-processing device according to claim 1, the circuit for changing the gate-applied voltage applying the first and third voltages based on an accumulation enable signal and a reading out enable signal, respectively.